

# ST. LOUIS COUNTY

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INCLUDED: [Significant feature(s) of bridge given in boldface]  
 [Field inventoried bridge indicated by asterisk]

Inv. No.	MHTD	Bridge Name	Description
STLO01	F 180R1	Mattese Creek Bridge	1- 50' <b>concrete filled spandrel arch</b> 1922 Unit Construction Company
STLO02	G 681R	Deer Creek Bridge	1- 70' <b>concrete filled spandrel arch</b> 1923 E.C. Johnson
STLO03	H 990R	Two Mile Creek Bridge	1- 60' <b>concrete filled spandrel arch</b> 1930 W.C. McNeelly Company
STLO04	J 217	Wabash Railroad Overpass	18-66' steel plate deck girder viaduct 1935 Skrainka Construction Co.
STLO05	J 421	Meramec River Bridge	3-130' <b>riveted Warren deck truss</b> 1932 Frazier-Davis Constr. Co.
*STLO06	K 205	Meramec River Bridge	2-210' <b>rivet Parker through truss, skewed</b> 1934 Samuel Kraus Company
*STLO07	K 239R2	St. Charles Bridge	5-420' <b>pinned Pennsylv. through truss</b> 1904 Midland Bridge Company
*STLO08	K 458	Meramec River Bridge	2-220' <b>riveted Parker through truss</b> 1936 F.T. O'Dell
*STLO09	K 637R	Meramec River Bridge	3-264' <b>cantilevered tied arch</b> 1940 Massman Construction Co.
STLO10	K 795R	Highway 40 Overpass	3-123' steel plate deck girder 1941 Blackwell Corporation
STLO11	K 854	Highway 40 Underpass	2- 61' <b>concrete rigid frame</b> 1941 Atkinson-Windle Company
STLO12	K 861	Highway 40 Underpass	2- 62' <b>concrete rigid frame</b> 1944 Isreal Brothers
STLO13	L 53R1	Highway 231 Overpass	2- 66' <b>concrete rigid frame</b> 1947 J.E. Latta Construction Co.
STLO14	U3875130	Hall's Ferry Road Bridge	1- 80' <b>riveted polyg. Warren pony truss</b> 1947 J.S. Alberici
STLO15	U3875452	Gravois Road Bridge	2-200' <b>riveted Parker through truss</b> 1925 Vincennes Bridge Company
STLO16	052500.3	Black Creek Culvert	1- 28' <b>concrete arch culvert</b> c1930
STLO17	096044.8	Quinette Road Bridge	1- 70' riveted Pratt half-hip pony truss 1913 Miller and Borcharding
*STLC18	none	Chain of Rocks Bridge	10-700' <b>riveted cantilever through truss</b> 1929 Union Bridge and Constr. Co.

## EXCLUDED:

Warren pony truss  
096013.2

# ST. LOUIS COUNTY

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## EXCLUDED (cont.):

### Steel stringer

J 149R1	J 217	J 255R	J 824	J 891R	K 342	K 463
K 464	K 638R	U3875003	U3875101B	033000.1	052000.1	096010.2
096010.3	096013.8	096016.6	096033.6	096035.1	096043.7	096052.4
096310.9	135500.1	135500.2	231500.1	3275R0.1	419000.2	432000.9
432001.2	432001.3					

### Steel girder

H 924	K 795R	U3875002
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### Concrete girder

H 923R	J 827R	J 848R	K 506R	K 849	U3875001	U3875107
U3875110	U3875131	U3875153	U3875455	W 332	Z 774	Z 778
Z 779R	Z 785	Z 786	Z 787	096026.9	096031.9	096032.9
096033.1	096034.9	096038.9	096039.2	096039.8	096040.0	096040.2
096050.9	096311.0	142000.1	228000.1	231500.2	231500.3	231500.5

### Concrete slab

F 132R1	J 416	U3875001	U3875146	U3875453	U3875456	Z 557R
Z 773	Z 780R	096025.9	096032.1	096039.3	096042.0	096310.4
329500.1						

### Concrete box culvert

A 3933	F 181R1	F 182R2	F 183R1	F 184R1	F1115R1	J 254R
J 513R	J 522R	J 539R	J 825	J 890	K 632	L 269R
U3875281	U3875312C	U3875316C	Y 241	096013.9	096020.8	096027.1
096027.3	096031.7	096041.0	096044.4	096046.4	146500.2	4520R0.1

### Timber stringer

U3875461

## SUMMARY:

	Primary	Secondary	Urban	Other	Total
Included	14	2	2	1	19
Excluded	24	61	39	0	124
	28	63	41	1	133 structures

# Mattese Creek Bridge

STLO01

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## GENERAL DATA

structure no.:	F 180R1	city/town:	Lemay
county:	St. Louis	feature inters.:	Mattese Creek
		cadastral grid:	
		highway route:	U.S. Highway 61
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure:	concrete filled spandrel arch		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	50.0'	alterations:	roadway widened and guardrails replaced, 1933
total length:	52.0'	floor/decking :	concrete deck over earth fill
roadway width:	42.0'	other features:	MSHD-standard concrete guardrails

## HISTORICAL DATA

erection date:	1921-22
erection cost:	\$7,688.60
designer:	Missouri State Highway Department
fabricator :	none
contractor:	Unit Construction Company, St. Louis MO
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number F 180R1; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Third Biennial Report of the State Highway Commission of Missouri: 1921-22, page 143.
sign. rating:	39
evaluation:	NRHP non-eligible (one of earliest remaining examples of MSHD concrete bridge design, substantially altered)

Inventoried by: Clayton B. Fraser    2 August 1994

# Deer Creek Bridge

STLO02

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## GENERAL DATA

structure no.:	G 681R	city/town:	St. Louis
county:	St. Louis	feature inters.:	Deer Creek
		cadastral grid:	
		highway route:	State Highway 100
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure:	concrete filled spandrel arch, skewed		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	good
span length:	70.0'	alterations:	roadway widened and guardrails replaced, 1930
total length:	131.0'	floor/decking :	concrete deck over earth fill
roadway width:	56.0'	other features:	MSHD-standard concrete guardrails

## HISTORICAL DATA

erection date:	1923
erection cost:	\$18,134.00
designer:	Missouri State Highway Department
fabricator :	none
contractor :	E.C. Johnson, Carrollton MO
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number G 681R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.
sign. rating:	37
evaluation:	NRHP non-eligible (relatively early example of MSHD concrete bridge design, substantially altered)

inventoried by: Clayton B. Fraser    2 August 1994

# Two Mile Creek Bridge

STLO03

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## GENERAL DATA

structure no.: H 990R      city/town: St. Louis  
county: St. Louis      feature inters.: Two Mile Creek  
cadastral grid:  
highway route: U.S. Highway 61  
highway distr.: 6  
current owner: Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure: concrete filled spandrel arch  
substructure: concrete abutments and wingwalls

span number: 1      condition: good  
span length: 60.0'      alterations: roadway widened and one guardrail replaced,  
total length: 122.0'      1977  
roadway width: 74.0'      floor/decking : concrete deck over earth fill  
other features: stone veneer guardrails, one side; concrete/steel pipe guardrails, one side

## HISTORICAL DATA

erection date: 1930  
erection cost: \$19,348.24  
designer: Missouri State Highway Department  
fabricator : none  
contractor: W.C McNeely Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number H 990R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 37  
evaluation: NRHP non-eligible (typical example of MSHD concrete arch bridge design, substantially altered)

Inventoried by: Clayton B. Fraser      2 August 1994

# Wabash Railroad Overpass

STLO04

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## GENERAL DATA

structure no.: J 217                      city/town: St. Louis  
county: St. Louis                      feature inters.: Wabash Railroad  
cadastral grid:  
highway route: State Highway 61TR  
highway distr.: 6  
current owner: Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure: 3 steel plate deck girders with 15 steel stringer approach spans  
substructure: concrete abutments, wingwalls and hammerhead spill-through piers

span number: 1; 2; 15                      condition: good  
span length: 66'; 59'; 47'                      alterations: none  
total length: 1350.0'                      floor/decking : concrete deck over steel stringers  
roadway width: 42.0'                      other features: concrete guardrails with Italianate cutouts

## HISTORICAL DATA

erection date: 1935  
erection cost: \$199,804.94  
designer: Missouri State Highway Department  
fabricator : unknown  
contractor: Skrainka Construction Company

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 217; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Tenth Biennial Report of the State Highway Commission of Missouri, 1935-36, page 263.

sign. rating: 44  
evaluation: NRHP non-eligible (technologically undistinguished example of MSHD beam bridge design)

inventoried by: Clayton B. Fraser    2 August 1994

# Meramec River Bridge

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STLO05

## GENERAL DATA

structure no.:	J 421	city/town:	1.8 miles east of Eureka
county:	St. Louis	feature inters.:	Meramec River
		cadastral grid:	
		highway route:	Interstate 44
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure:	steel, 12-panel, rigid-connected Warren deck truss, with steel stringer approach spans		
substructure:	concrete abutments, wingwalls and piers with bullnosed cutwaters		
span number:	3	condition:	good
span length:	130.0'	alterations:	none
total length:	1009.0'	floor/decking :	concrete deck over steel stringers
roadway width:	30.0'	other features:	steel angle guardrails

## HISTORICAL DATA

erection date:	1931-32
erection cost:	\$133,592.99
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Frazier-Davis Construction Company
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 421; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.
sign. rating:	63
evaluation:	NRHP possibly eligible (well-preserved example of uncommon structural type, located at regionally important river crossing)

inventoried by: Clayton B. Fraser    2 August 1994

# Meramec River Bridge

STLO06

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## GENERAL DATA

structure no.:	K 205	city/town:	2.7 miles north of Arnold
county:	St. Louis	feature inters.:	Meramec River
		cadastral grid:	
		highway route:	U.S. Highway 61
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure: steel, 9-panel, rigid-connected Parker through truss, with steel stringer approach spans

substructure: concrete abutments, wingwalls and piers

span number:	2	condition:	good
span length:	210.0'	alterations:	none
total length:	845.0'	floor/decking :	concrete deck over steel stringers
roadway width:	42.0'	other features:	steel guardrails

## HISTORICAL DATA

erection date: 1933-34

erection cost: \$250,283.48

designer: Missouri State Highway Department

fabricator : unknown

contractor: Samuel Kraus Company, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 205; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Ninth Biennial Report of the State Highway Commission of Missouri, 1933-34, pages 182, 187; field inspection by Clayton Fraser, 10 June 1994.

sign. rating: 75

evaluation: NRHP eligible (only example of this uncommon structural type found in the inventory)

inventoried by: Clayton B. Fraser 2 August 1994

# St. Charles Bridge

STLO07

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## GENERAL DATA

structure no.:	K 239R2	city/town:	St. Charles
county:	St. Louis / St. Charles	feature inters.:	Missouri River
		cadastral grid:	T47N R5E
		highway route:	abandoned State Highway 115
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure: steel pin-connected Pennsylvania through truss  
substructure: concrete-filled steel cylinder piers

span number:	5	condition:	fair
span length:	420.0'	alterations:	deck replaced with concrete and approaches rebuilt, 1939
total length:	2873.0'	floor/decking :	concrete deck
roadway width:	19.0'	other features:	steel pipe guardrails

## HISTORICAL DATA

erection date: 1900-04  
erection cost: unknown  
designer: J.A.L. Waddell, Kansas City MO  
fabricator : unknown  
contractor: Midland Bridge Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 239R2; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; U.S. Engineer Office, **Bridges, Missouri River: Data, History & Laws**, 1933, page 13; field inspection by Clayton Fraser, 10 June 1994.

sign. rating: 64  
evaluation: NRHP determined eligible (excellent early highway bridge over the Mississippi River)

inventoried by: John J. Roberts    2 August 1994

# Meramec River Bridge

STLO08

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## GENERAL DATA

structure no.:	K 458	city/town:	1.2 miles southeast of Arnold
county:	St. Louis / Jefferson	feature inters.:	Meramec River
		cadastral grid:	
		highway route:	State Highway 231
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure: steel, 9-panel, rigid-connected Parker through truss, with steel stringer approach spans

substructure: concrete abutments, wingwalls and piers

span number:	2	condition:	good
span length:	220'	alterations:	none
total length:	1179.0'	floor/decking :	concrete deck over steel stringers
roadway width:	22.0'	other features:	steel guardrails

## HISTORICAL DATA

erection date: 1935-36

erection cost: \$226,997.33

designer: Missouri State Highway Department

fabricator : unknown

contractor: F.T. O'Dell

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 458; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Tenth Biennial Report of the State Highway Commission of Missouri, 1935-36, page 262; field inspection by Clayton Fraser, 10 June 1994.

sign. rating: 51

evaluation: NRHP possibly eligible (well-preserved, long-span example of MSHD standard truss design)

inventoried by: Clayton B. Fraser 2 August 1994

# Meramec River Bridge

STLO09

## GENERAL DATA

structure no.:	K 637R	city/town:	3.2 miles northwest of Arnold
county:	St. Louis / Jefferson	feature inters.:	Meramec River
		cadastral grid:	
		highway route:	State Highway 21
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure: steel, 11-panel, rigid-connected, cantilevered tied arch  
substructure: concrete abutments, wingwalls and piers

span number:	1; 2	condition:	good
span length:	264.0'; 192.0'	alterations:	deck replaced, 1985
total length:	648.0'	floor/decking :	concrete deck over steel stringers
roadway width:	46.0'	other features:	upper chord, inclined end post and arch ribs: 2 built-up channels with cover plate and lacing; lower chord, vertical and diagonal: H-section beam; lateral bracing: 2 angles; strut: 4 angles with lacing; floor beam: I-beam; guardrail: ornamental steel

## HISTORICAL DATA

erection date: 1940  
erection cost: \$323,154.04  
designer: Missouri State Highway Department  
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO  
contractor: Massman Construction Company, Kansas City MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 637R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; **Twelfth Biennial Report of the State Highway Commission of Missouri**, 1939-40, pages 189-190; Howard H. Mullins, "Continuous Tied Arch Built in Missouri," **Engineering News-Record** 126 (5 June 1941), pages 84-87; field inspection by Clayton Fraser, 10 June 1994.

sign. rating: 76  
evaluation: NRHP eligible (first of its structural type built in the United States)

Inventoried by: Clayton B. Fraser 2 August 1994

# Highway 40 Overpass

STLO10

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## GENERAL DATA

structure no.: K 795R      city/town: St. Louis  
county: St. Louis      feature inters.: Clayton Road  
cadastral grid:  
highway route: U.S. Highway 40  
highway distr.: 6  
current owner: Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure: steel plate deck girder, with steel stringer approach spans  
substructure: concrete abutments, wingwalls and piers

span number: 3      condition: good  
span length: 123.0'      alterations: substructure repair and deck replacement,  
total length: 586.0'      1984  
roadway width: 41.8'      floor/decking : concrete deck over steel stringers  
other features: curved alignment; MSHD-standard concrete  
guardrails with slotted cutouts

## HISTORICAL DATA

erection date: 1940-41  
erection cost: \$300,373.08  
designer: Missouri State Highway Department  
fabricator : unknown  
contractor: Blackwell Corporation

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 795R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

sign. rating: 38  
evaluation: NRHP non-eligible (undistinguished, relatively late example of MSHD beam bridge design)

inventoried by: Clayton B. Fraser    2 August 1994

# Highway 40 Underpass

STLO11

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## GENERAL DATA

structure no.:	K 854	city/town:	St. Louis
county:	St. Louis	feature inters.:	U.S. Highway 40
		cadastral grid:	
		highway route:	McKnight Road
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure:	concrete rigid frame		
substructure:	concrete abutments, wingwalls and piers		
span number:	2	condition:	good
span length:	61.0'	alterations:	none
total length:	123.0'	floor/decking :	concrete deck
roadway width:	44.0'	other features:	arched haunches at girders; Art Moderne detailing at piers; steel guardrails

## HISTORICAL DATA

erection date:	1940-41
erection cost:	\$55,180.90
designer:	Missouri State Highway Department
fabricator :	none
contractor:	Atkinson-Windle Company
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 854; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Elmer Napier, "Rigid-Frame Bridges," Roads and Bridges, April 1940, page 13.
sign. rating:	50
evaluation:	NRHP possibly eligible (well-preserved example of uncommon structural type)

Inventoried by: Clayton B. Fraser    2 August 1994

# U.S. Highway 40 Underpass

STLO12

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## GENERAL DATA

structure no.:	K 861	city/town:	St. Louis
county:	St. Louis	feature inters.:	U.S. Highway 40
		cadastral grid:	
		highway route:	McCutcheon Road
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure:	concrete rigid frame		
substructure:	concrete abutments, wingwalls and pier		
span number:	2	condition:	good
span length:	62.0'	alterations:	none
total length:	124.0'	floor/decking :	concrete deck
roadway width:	44.0'	other features:	arched girders; MSHD-standard concrete guardrails

## HISTORICAL DATA

erection date:	1944
erection cost:	\$74,136.00
designer:	Missouri State Highway Department
fabricator :	unknown
contractor:	Israel Brothers

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 861; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Elmer Napier, "Rigid-Frame Bridges," Roads and Bridges, April 1940, page 13.

sign. rating:	50
evaluation:	NRHP possibly eligible (well-preserved example of uncommon structural type)

Inventoried by: Clayton B. Fraser    2 August 1994

# Highway 231 Overpass

STLO13

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## GENERAL DATA

structure no.:	L 53R1	city/town:	1.0 mile east of Mehlville
county:	St. Louis	feature inters.:	Interstate Highway 255
		cadastral grid:	
		highway route:	State Highway 231
		highway distr.:	6
		current owner:	Missouri Highway and Transportation Department

## STRUCTURAL DATA

superstructure:	concrete rigid frame		
substructure:	concrete abutments, wingwalls and pier		
span number:	2	condition:	good
span length:	66.0'	alterations:	none
total length:	220.0'	floor/decking :	concrete deck
roadway width:	52.0'	other features:	arched girders; solid concrete guardrails; abstract emblem on spandrel

## HISTORICAL DATA

erection date:	1947
erection cost:	\$158,980.13
designer:	Missouri State Highway Department
fabricator :	none
contractor:	J.E. Latta Construction Company; Grantwood Contracting Company; Henry L. Perkinson
references:	Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number L 53R1 Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Elmer Napier, "Rigid-Frame Bridges," <i>Roads and Bridges</i> , April 1940, page 13.
sign. rating:	55
evaluation:	NRHP possibly eligible (well-preserved example of uncommon structural type)

Inventoried by: Clayton B. Fraser 2 August 1994

# Hall's Ferry Road Bridge

STLO14

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## GENERAL DATA

structure no.: U3875130      city/town: St. Louis  
county: St. Louis      feature inters.: Cold Water Creek  
cadastral grid:  
highway route: Old Hall's Ferry Road  
highway distr.: 6  
current owner: St. Louis County

## STRUCTURAL DATA

superstructure: steel, 8-panel, rigid-connected Warren pony truss with polygonal upper chord  
substructure: concrete abutments and wingwalls

span number: 1      condition: good  
span length: 80.0'      alterations: deck replaced, 1969; guardrails replaced  
total length: 83.0'      floor/decking : concrete deck over steel stringers  
roadway width: 28.0'      other features: steel Armco guardrails

## HISTORICAL DATA

erection date: 1947  
erection cost: unknown  
designer: C.F. Berthold, St. Louis County Engineer's Office  
fabricator : unknown  
contractor : J.S. Alberici

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number U3875130, "Replacement Bridge #203 over Cold Water Creek," original construction drawings by St. Louis County Engineer, February 1947 - located at St. Louis County Engineer's Office.

sign. rating: 46  
evaluation: NRHP non-eligible (relatively late example of uncommon structural type)

Inventoried by: Clayton B. Fraser      2 August 1994

# Gravois Road Bridge

STLO15

## GENERAL DATA

structure no.: U3875452      city/town: St. Louis  
county: St. Louis      feature inters.: Meramec River  
cadastral grid:  
highway route: Gravois Road  
highway distr.: 6  
current owner: St. Louis County

## STRUCTURAL DATA

superstructure: steel, 10-panel, rigid-connected Parker through truss, with 6-panel rigid-connected Pratt through truss approach spans  
substructure: concrete abutments, wingwalls and hammerhead spill-through piers

span number: 2; 2      condition: good  
span length: 200.0'; 120.0' alterations: none  
total length: 649.0'      floor/decking : concrete deck over steel stringers  
roadway width: 20.0'      other features: upper chord and inclined end post: 2 channels with cover plate and lacing; lower chord: 2 channels with lacing; vertical: 2 channels with lacing (4 angles with lacing at the hip); diagonal: 2 angles with batten plates; lateral bracing: 1 angle; strut: 4 angles with bracing; floor beam: I-beam; guardrail: steel angles

## HISTORICAL DATA

erection date: 1924-25  
erection cost: \$92,962.00  
designer: Missouri State Highway Department  
fabricator : Vincennes Bridge Company, Vincennes IN  
contractor : Vincennes Bridge Company, Vincennes IN

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number U3875452; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; field inspection by Clayton Fraser, 10 June 1994.

sign. rating: 47  
evaluation: NRHP non-eligible (typically configured example of MSHD standard long-span truss design)

inventoried by: Clayton B. Fraser      2 August 1994

# Black Creek Culvert

STLO16

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## GENERAL DATA

structure no.:	052500.3	city/town:	Brentwood
county:	St. Louis	feature inters.:	Black Creek
		cadastral grid:	
		highway route:	Central Avenue
		highway distr.:	6
		current owner:	City of Brentwood

## STRUCTURAL DATA

superstructure:	concrete arch culvert		
substructure:	concrete abutments and wingwalls		
span number:	1	condition:	fair
span length:	28.0'	alterations:	closed to vehicular traffic
total length:	30.0'	floor/decking :	concrete deck over earth fill
roadway width:	29.0'	other features:	timber guardrails

## HISTORICAL DATA

erection date:	c1930
erection cost:	unknown
designer:	unknown
fabricator :	none
contractor:	unknown

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 052500.3.

sign. rating:	29
evaluation:	NRHP non-eligible (undistinguished, small-scale culvert, inadequately documented)

inventoried by: Clayton B. Fraser 2 August 1994

# Quinette Road Bridge

STLO17

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## GENERAL DATA

structure no.: 096044.8      city/town: St. Louis  
county: St. Louis      feature inters.: Grand Glaize Creek  
cadastral grid:  
highway route: Quinette Road  
highway distr.: 6  
current owner: St. Louis County

## STRUCTURAL DATA

superstructure: steel, 4-panel, rigid-connected Pratt half-hip pony truss  
substructure: stone masonry abutments

span number: 1      condition: fair  
span length: 70.0'      alterations: unknown  
total length: 74.0'      floor/decking : concrete deck over steel stringers  
roadway width: 15.0'      other features: steel angle guardrails

## HISTORICAL DATA

erection date: 1913  
erection cost: unknown  
designer: Miller and Borcharding, St. Louis MO  
fabricator : Stupp Brothers Bridge and Iron Company, St. Louis MO (probable)  
contractor: Miller and Borcharding, St. Louis MO

references: Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number 096044.8; Original construction drawings by Miller and Borcharding, 18 April 1913 - located at St. Louis County Engineer's Office.

sign. rating: 42  
evaluation: NRHP non-eligible (undistinguished pony truss)

Inventoried by: Clayton B. Fraser      2 August 1994

# Chain of Rocks Bridge

STLO18

## GENERAL DATA

structure no.: none                      city/town: St. Louis  
county: St. Louis MO                      feature inter: Mississippi River  
          Madison IL                        cadastral grid:  
   highway route: abandoned U.S. Highway 66  
   highway distr.: 6  
   current owner: City of Madison, Illinois

## STRUCTURAL DATA

superstructure: steel, 20- and 12-panel, rigid-connected cantilevered through truss, with rigid-connected Warren through truss approach spans  
substructure: concrete abutments, wingwalls and piers

span number: 2; 8                      condition: fair  
span length: 700.0';350.0' alterations: closed to traffic, 1970  
total length: 5350.0'                      floor/decking : concrete deck over steel stringers  
roadway width: 40.0'                      other features: upper chord and inclined end post: 2 built-up channels with cover plate and double lacing; lower chord: 2 built-up channels with lacing; vertical: 2 channels with lacing, built-up I-beam; diagonal: 2 channels with lacing; lateral bracing: 4 angles with lacing; strut: 4 angles with bracing; floor beam: I-beam; guardrail: steel angles

## HISTORICAL DATA

erection date: 1927-29  
erection cost: \$2.5 million  
designer: Baxter L. Brown, Consulting Engineer, St. Louis MO  
fabricator : American Bridge Company, New York NY  
contractor: Union Bridge and Construction Company, New York NY

references: "Seven New Mississippi River Highway Bridges," *Engineering News-Record*, 31 July 1930, pages 181-84; Susan Croce Kelly and Quinta Scott, *Route 66* (Norman, Oklahoma: University of Oklahoma Press, 1988), page 76; Mary Charlotte Aubry Costello, *Mississippi River Bridge by Bridge* (By the Author, 1995), pages 66-67; Michael Wallis, *Route 66: The Mother Road* (New York: St. Martins Press, 1990), page 53; *St. Louis Globe-Democrat*, 5 November 1927, 2 December 1927, 2 March 1928, 17 August 1928, 25 June 1929, 21 July 1929, 18 March 1932, 17 May 1941, 25 August 1957; Peter Hemon, "Bridge's History a Troubled One," *St. Louis Post-Dispatch*, 15 April 1991; David G. Wrone, "Old Bridge a Secluded Teenage Hangout," *Bellefontaine-Jennings Journal*, 14 April 1991; field inspection by Clayton Fraser, 10 June 1994.

sign. rating: 77  
evaluation: NRHP eligible (outstanding large-scale truss on nationally significant highway crossing)

inventoried by: Clayton B. Fraser    2 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

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**NAME(S) OF STRUCTURE**

Meramec River Bridge  
MHTD: J 421

STLO05

**DATE(S) OF CONSTRUCTION**

1931-32

**LOCATION**

Interstate 44 over Meramec River;  
1.8 miles east of Eureka; St. Louis County, Missouri

**USE (ORIGINAL / CURRENT)**

highway bridge / highway bridge

**RATING** NRHP possibly eligible (score: 63)

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**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 3

span length: 130.0'

total length: 1009.0'

roadway wdt.: 30.0'

superstructure: steel, 12-panel, rigid-connected Warren deck truss, with steel stringer approach spans

substructure: concrete abutments, wingwalls and piers with bullnosed cutwaters

floor/decking: concrete deck over steel stringers

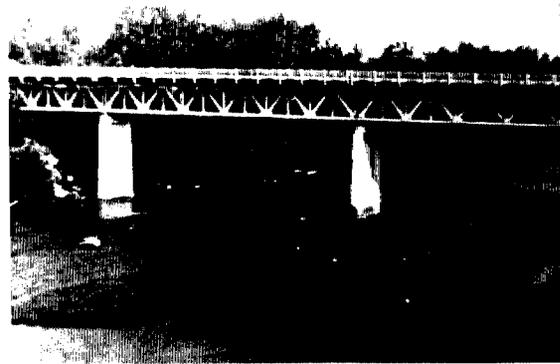
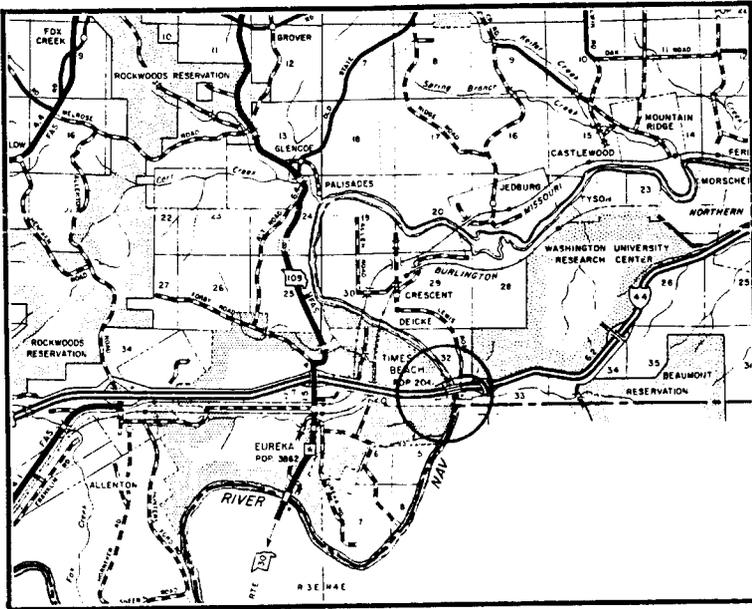
other features: steel angle guardrails

Situated some two miles east of Eureka, this dramatic structure carries Interstate Highway 44 over the Meramec River. Featuring a rare riveted deck truss, the superstructure is supported high above the river by concrete piers and abutments. The design for this three-span bridge was completed in the spring of 1931 by engineers for the Missouri State Highway Department as part of the improvements being made on U.S. Highway 66. A contract for the bridge's fabrication and erection was let that July to the Frazier-Davis Construction Company. Using steel components rolled by the Illinois Steel Company of Chicago, the contractors erected the bridge in 1931-32 for \$133,592.99. Virtually unchanged since its completion, the Meramec River Bridge continues to carry traffic in western St. Louis County.

During the late 19th and early 20th centuries, numerous through and pony trusses were built on roads and highways throughout Missouri. Deck trusses—in which the roadway is carried by the truss's upper chords—were built far less often. Never very common, this truss type has suffered attrition throughout the state, until only seven deck trusses are now listed in Missouri's Structure Inventory and Appraisal list. Significantly, all are located on the state highway system and were built in the 1930s. An important crossing of the Meramec River on Route 66, this three-span truss is both historically and technologically noteworthy—a regionally important remnant of early highway construction in the state.

**NAME(S) OF STRUCTURE**  
Meramec River Bridge

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number J 421; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO.

**INVENTORIED BY**  
Clayton B. Fraser

**AFFILIATION**  
Fraserdesign, Loveland CO

**DATE**  
4 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Meramec River Bridge  
MHTD: K 205

STLO06

**DATE(S) OF CONSTRUCTION**

1933-34

**LOCATION**

U.S. Highway 61 over Meramec River;  
2.7 miles north of Arnold; St. Louis County, Missouri

**USE (ORIGINAL / CURRENT)**

highway bridge / highway bridge

**RATING** NRHP eligible (score: 75)

**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 2  
span length: 210.0'  
total length: 845.0'  
roadway wdt.: 42.0'

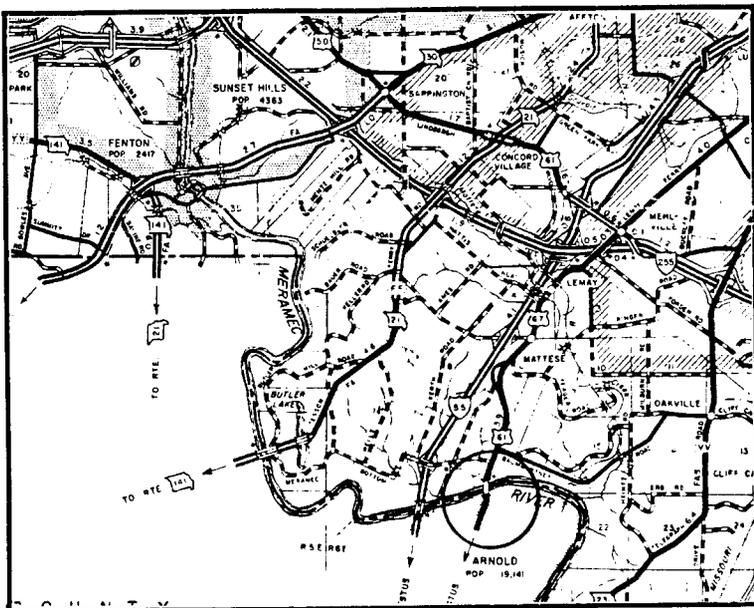
superstructure: steel, 9-panel, rigid-connected Parker through truss, with steel stringer approach spans  
substructure: concrete abutments, wingwalls and piers  
floor/decking: concrete deck over steel stringers  
other features: steel guardrails

This long-span through truss carries U.S. Highway 61 over the Meramec River near Arnold, at the southern periphery of St. Louis. The Meramec River Bridge is comprised of two rigid-connected Parker through truss spans, with eight steel stringer approach spans, supported on a skew by a concrete substructure. The structure was designed in the summer of 1933 by the state highway department and built in 1933-34 by contractor Samuel Kraus of St. Louis for about \$250,000. Since its completion, the bridge has functioned in place, without substantial alteration.

The Missouri State Highway Department used riveted Parker configurations for its long-span through trusses almost from the time the agency developed its first bridge standards around 1920. Structurally straightforward and versatile, these graceful spans were erected throughout the state in span lengths ranging from about 160 to 250 feet. Virtually all of these structures featured trusses with straight configurations; skewed trusses were a relative rarity. With its heavily skewed configuration and 210-foot span, the Meramec River Bridge is thus distinguished as one of the longest and the only skewed example among the state's remaining Parker trusses.

**NAME(S) OF STRUCTURE**  
Meramec River Bridge

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP



**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 205; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Ninth Biennial Report of the State Highway Commission of Missouri, 1933-34, pages 182, 187; field inspection by Clayton Fraser, 10 June 1994.

**INVENTORIED BY**  
Clayton B. Fraser

**AFFILIATION**  
Fraserdesign, Loveland CO

**DATE**  
4 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

St. Charles Bridge  
MHTD: K 239R2

STLO07

**DATE(S) OF CONSTRUCTION**

1900-04

**LOCATION**

abandoned State Highway 115 over Missouri River; T47N R5E  
St. Charles; St. Louis / St. Charles County, Missouri

**USE (ORIGINAL / CURRENT)**

roadway bridge / abandoned

**RATING** NRHP determined eligible (score: 64)

**CONDITION**

fair

**OWNER**

Missouri Highway and Transportation Department

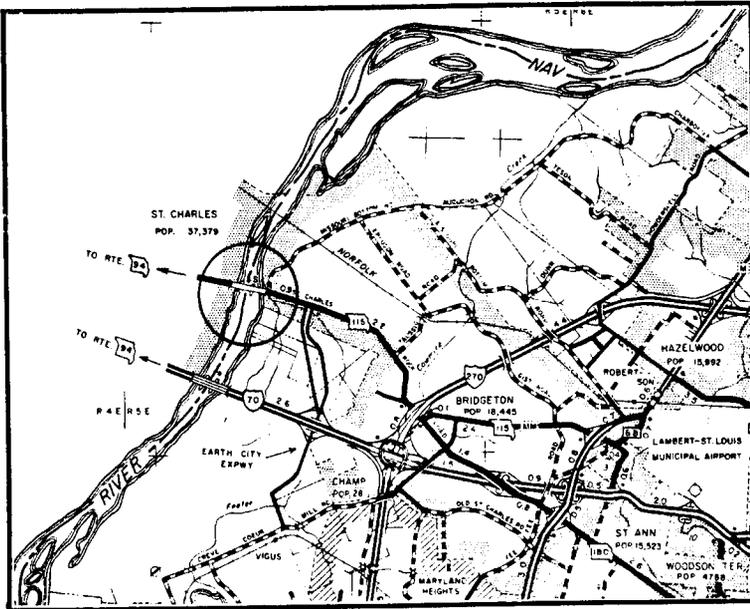
span number: 5  
span length: 420.0'  
total length: 2873.0'  
roadway wdt.: 19.0'

superstructure: steel pin-connected Pennsylvania through truss  
substructure: concrete-filled steel cylinder piers  
floor/decking: concrete deck  
other features: steel pipe guardrails

The St. Charles Bridge spans the Missouri River, connecting St. Charles and St. Louis. Originally built in 1902, the structure must have been a major achievement for the St. Louis-St. Charles area. In its current condition, the bridge takes the form of a large-scale Pennsylvania through truss. The Pennsylvania truss, characterized by an arched upper chord, is a rare find today in Missouri or other states. The Pennsylvania truss gained its name by its frequent employment in railroad bridges in Pennsylvania around the turn of the century. The St. Charles bridge retains the Pennsylvania's original use, carrying railroad tracks with the roadway. Although its origins are an enigma, the St. Charles Bridge has endured most of the twentieth century with only minor reparations and modifications. It has carried automobile and rail traffic between the two eastern Missouri communities since its opening nearly a century ago.

**NAME(S) OF STRUCTURE**  
St. Charles Bridge

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP



**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 239R2; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; U.S. Engineer Office, Bridges, Missouri River: Data, History & Laws, 1933, page 13; field inspection by Clayton Fraser, 10 June 1994.

**INVENTORIED BY**  
Clayton B. Fraser

**AFFILIATION**  
Fraserdesign, Loveland CO

**DATE**  
4 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Meramec River Bridge

MHTD: K 458

STLO08

**DATE(S) OF CONSTRUCTION**

1935-36

**LOCATION**

State Highway 231 over Meramec River;  
1.2 miles southeast of Arnold; St. Louis / Jefferson County, Missouri

**USE (ORIGINAL / CURRENT)**

highway bridge / highway bridge

**RATING** NRHP possibly eligible (score: 51)

**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 2

span length: 220'

total length: 1179.0'

roadway wdt.: 22.0'

superstructure: steel, 9-panel, rigid-connected Parker through truss, with steel stringer approach spans  
substructure: concrete abutments, wingwalls and piers  
floor/decking: concrete deck over steel stringers  
other features: steel guardrails

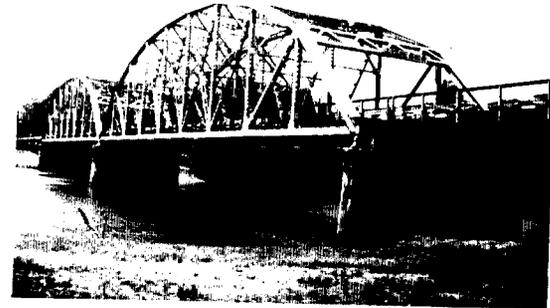
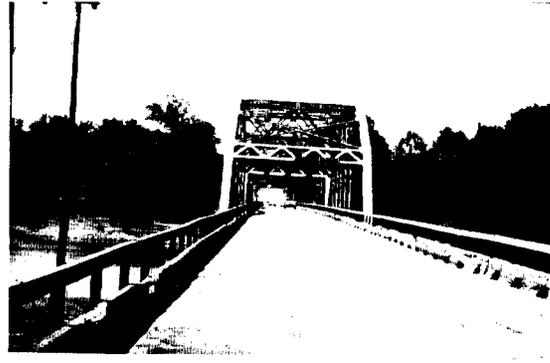
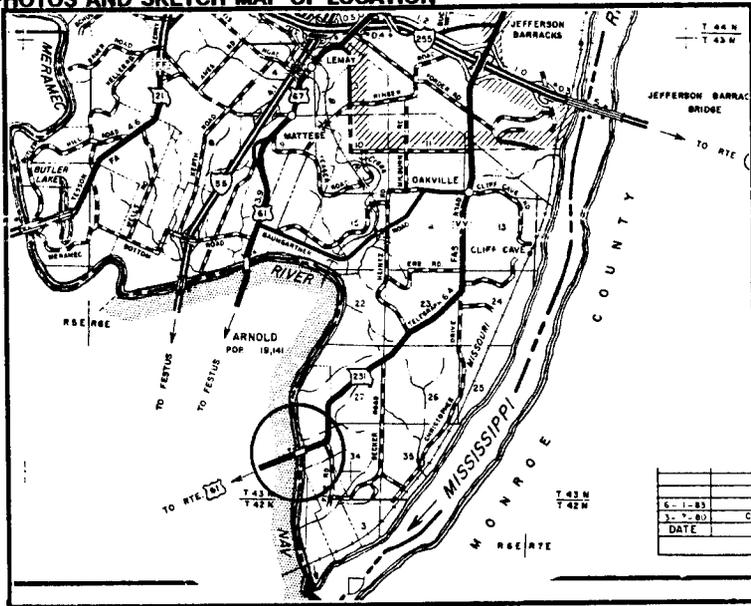
Extending south from St. Louis, State Highway 231 is a secondary route leading from St. Louis to Jefferson County. In the mid-1930s the Missouri State Highway Commission began efforts to improve the roadway, including the construction of this major bridge over the Meramec River. Opting for steel construction rather than concrete, the highway commission built this rigid-connected truss, with shorter steel stringer spans over the river's floodplain. Drawings were prepared by the Missouri State Highway Department in late 1935. As delineated by MSHD, the structure was comprised of two 220-foot Parker through trusses and 14 50-foot stringer approach spans, all supported by a concrete substructure on driven piles. MSHD advertised the project for bids that fall. On November 8, 1935, a contract for the bridge's construction was awarded to F.T. O'Dell. O'Dell completed the crossing the following year. Today unchanged from its original construction, the Meramec River Bridge displays a high degree of physical integrity as it continues to carry traffic.

The Missouri State Highway Department used riveted Parker configurations for its long-span through trusses almost from the time the agency developed its first bridge standards around 1920. Structurally straightforward and versatile, these graceful spans were erected throughout the state in span lengths ranging from about 160 to 250 feet. With a span length of 220 feet, the Meramec River Bridge is distinguished as one of the longest among the state's remaining Parker trusses.

**NAME(S) OF STRUCTURE**

Meramec River Bridge

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 458; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Tenth Biennial Report of the State Highway Commission of Missouri, 1935-36, page 262; field inspection by Clayton Fraser, 10 June 1994.

**INVENTORIED BY**

Clayton B. Fraser

**AFFILIATION**

Fraserdesign, Loveland CO

**DATE**

4 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Meramec River Bridge  
MHTD: K 637R

STLO09

**DATE(S) OF CONSTRUCTION**

1940

**LOCATION**

State Highway 21 over Meramec River;  
3.2 miles northwest of Arnold; St. Louis / Jefferson County, Missouri

**USE (ORIGINAL / CURRENT)**

highway bridge / highway bridge

**RATING** NRHP eligible (score: 76)

**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 1; 2

span length: 264.0'; 192.0'

total length: 648.0'

roadway wdt.: 46.0'

superstructure: steel, 11-panel, rigid-connected, cantilevered tied arch

substructure: concrete abutments, wingwalls and piers

floor/decking: concrete deck over steel stringers

other features: upper chord, inclined end post and arch ribs: 2 built-up channels with cover plate and lacing; lower chord, vertical and diagonal: H-section beam; lateral bracing: 2 angles; strut: 4 angles with lacing; floor beam: I-beam; guardrail: ornamental steel

This three-span steel bridge carries State Highway 21 over the Meramec River on the line between St. Louis and Jefferson counties northwest of Arnold. The Meramec River Bridge was designed by the Missouri State Highway Commission Bureau of Bridges in 1939. "Since the Meramec River Bridge is located in a region that has been called the playground of St. Louis," bridge engineer Howard Mullins stated, "an effort was made to secure a structure of reasonable esthetic fitness." MSHD engineers considered several configurations for the bridge: a continuous plate rib tied arch, a three-span continuous truss, three single-span tied arches and a suspension bridge, among others, before developing the plan for a cantilevered tied arch. As delineated by the highway department, the structure would feature a 264-foot tied arch span, cantilevered on both sides by 192-foot anchor spans. "The continuity of the trusses and the action of the arch tie produce a structure which is threefold indeterminate," Mullins wrote. "A condition of single redundancy was also produced by the double intersection diagonals at the center of the arch truss. These double diagonals were used to permit a pleasing truss outline." The superstructure was supported by concrete spill-through piers, which were in turn founded on bedrock.

Designating the project as Federal Aid Project 806C(1), the highway department solicited competitive proposals in December 1939. A month later the state highway commission awarded a construction contract to the Massman Construction Company. The Kansas City-based contractor commissioned the superstructural fabrication to the Stupp Brothers Bridge and Iron Company of St. Louis. Massman's construction crew used traditional falseworks under the anchor spans and erected the center span by cantilevering from the sides. To connect the arch at center-span, the men removed the end bearing shoes on the anchor spans, lifting the two arch halves slightly, before the arch was riveted and the shoes replaced. Opened to traffic later in 1940, the Meramec River Bridge consumed some 1087 tons of structural steel. Since its completion, it has functioned in place, with the replacement of its original steel grid deck with concrete as the only alteration of note.

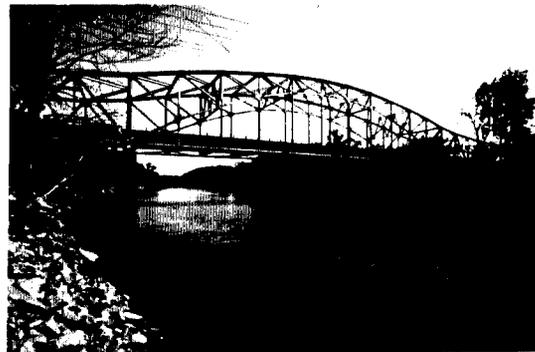
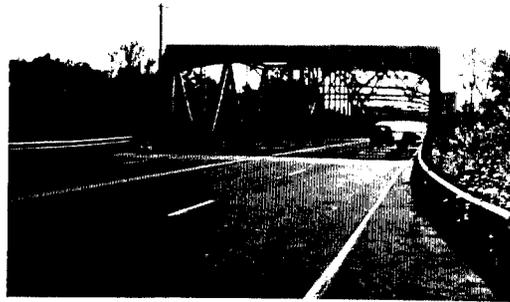
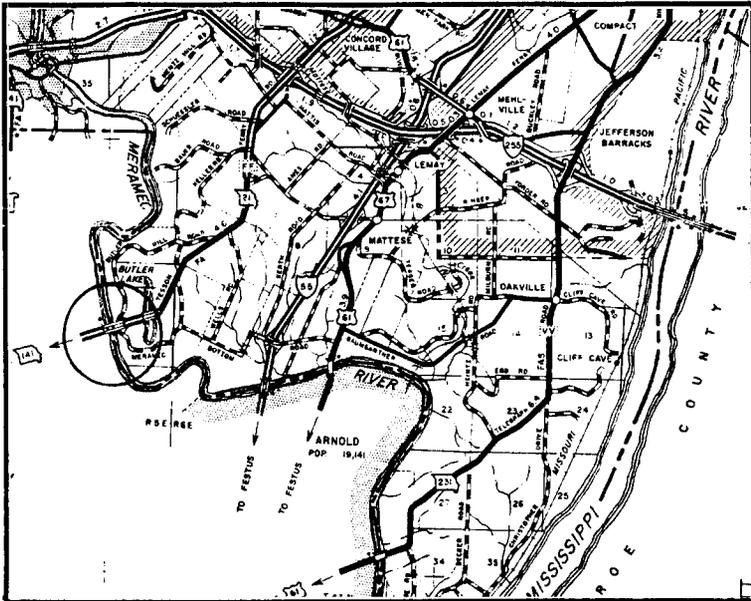
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Not only was the Meramec River Bridge the first continuous tied arch built in Missouri, it was the first of its kind built in the United States. "Of the many unusual highway bridges built in recent years few were more novel than one recently constructed over the Meramec River, a short distance south of St. Louis, by the Missouri state highway department," Mullins stated. Although its 264-foot span was modest by most standards and was dwarfed by the 845-foot Julien Dubuque Bridge built over the Mississippi River three years later, the Meramec River Bridge is technologically significant as a rare incidence of structural experimentation by the state highway department and an uncharacteristic acknowledgement by the department of bridge aesthetics. It is thus noteworthy for its distinctive appearance and its atypical configuration. In essentially unaltered condition, the Meramec River Bridge is a well-preserved example of highway bridge design in the pre-war years.

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**NAME(S) OF STRUCTURE**

Meramec River Bridge

**PHOTOS AND SKETCH MAP OF LOCATION****LOCATION MAP**TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

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**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 637R; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Twelfth Biennial Report of the State Highway Commission of Missouri, 1939-40, pages 189-190; Howard H. Mullins, "Continuous Tied Arch Built in Missouri," Engineering News-Record 126 (5 June 1941), pages 84-87; field inspection by Clayton Fraser, 10 June 1994.

**INVENTORIED BY**

Clayton B. Fraser

**AFFILIATION**

Fraserdesign, Loveland CO

**DATE**4 August 1994

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# HAER INVENTORY

Missouri Historic Bridge Inventory

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**NAME(S) OF STRUCTURE**

Highway 40 Underpass  
MHTD: K 854

STLO11

**DATE(S) OF CONSTRUCTION**

1940-41

**LOCATION**

McKnight Road over U.S. Highway 40;  
St. Louis; St. Louis County, Missouri

**USE (ORIGINAL / CURRENT)**

highway underpass / highway underpass

**RATING** NRHP possibly eligible (score: 50)

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**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 2

superstructure: concrete rigid frame

span length: 61.0'

substructure: concrete abutments, wingwalls and piers

total length: 123.0'

floor/decking: concrete deck

roadway wdt.: 44.0'

other features: arched haunches at girders; Art Moderne detailing at piers; steel guardrails

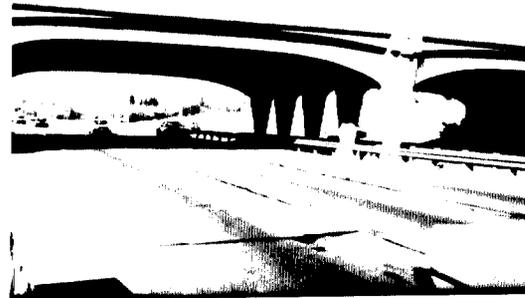
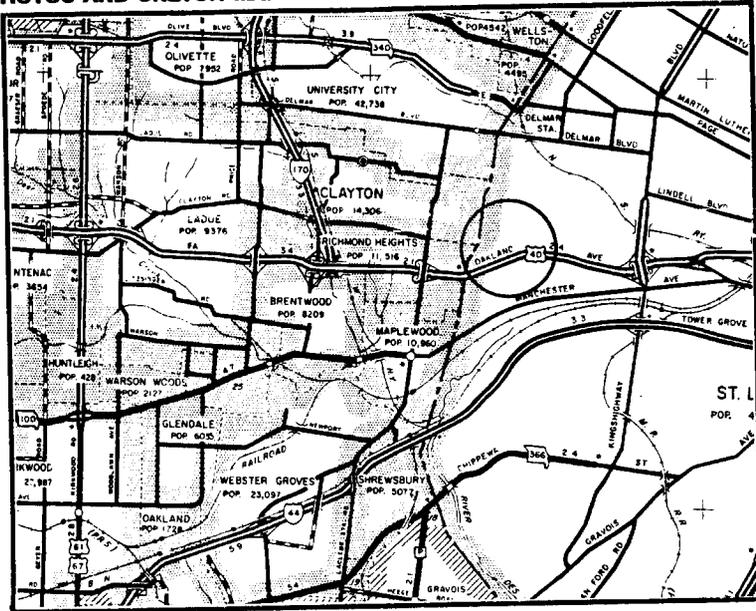
This twin-span concrete bridge carries McKnight Road over U.S. Highway 40 in St. Louis. The structure is a concrete rigid frame, which features four girder ribs with arched haunches, doweled rigidly to abutments and tapered concrete columns. The Highway 40 Underpass was designed by the Missouri State Highway Department as part of work on U.S. Highway 40 in St. Louis. On November 29, 1940, MSHD awarded a contract to build the bridge to the Atkinson-Windle Company. Presumably, Bushman finished the bridge the next year. Total cost: \$55,180.90. Since its completion, the underpass has carried vehicular traffic in essentially unaltered condition.

Developed by Westchester County, New York, in the early 1920s, the concrete rigid frame bridge became especially popular for federal relief projects during the 1930s. Both picturesque and practical, the flat or elliptically arched designs appealed to proponents of urban beautification. The Missouri State Highway Department used the concrete rigid frame sparingly in urban overpass situations, never adopting this structural type as a state standard. Only seven concrete rigid frame bridges have been identified by the statewide bridge inventory, all of which are in either St. Louis or Kansas City. Although built relatively late in the milieu of rigid frame construction, the Highway 40 Underpass is distinguished by its well-preserved condition. It is technologically significant as a relatively rare example of what was essentially an experimental structural type for the state highway department.

**NAME(S) OF STRUCTURE**

Highway 40 Underpass

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 854; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Elmer Napier, "Rigid-Frame Bridges," Roads and Bridges, April 1940, page 13.

**INVENTORIED BY**

Clayton B. Fraser

**AFFILIATION**

Fraserdesign, Loveland CO

**DATE**

4 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

U.S. Highway 40 Underpass  
MHTD: K 861

STLO12

**DATE(S) OF CONSTRUCTION**

1944

**LOCATION**

McCutcheon Road over U.S. Highway 40;  
St. Louis; St. Louis County, Missouri

**USE (ORIGINAL / CURRENT)**

highway underpass / highway underpass

**RATING** NRHP possibly eligible (score: 50)

**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 2

span length: 62.0'

total length: 124.0'

roadway wdt.: 44.0'

superstructure: concrete rigid frame

substructure: concrete abutments, wingwalls and pier

floor/decking: concrete deck

other features: arched girders; MSHD-standard concrete guardrails

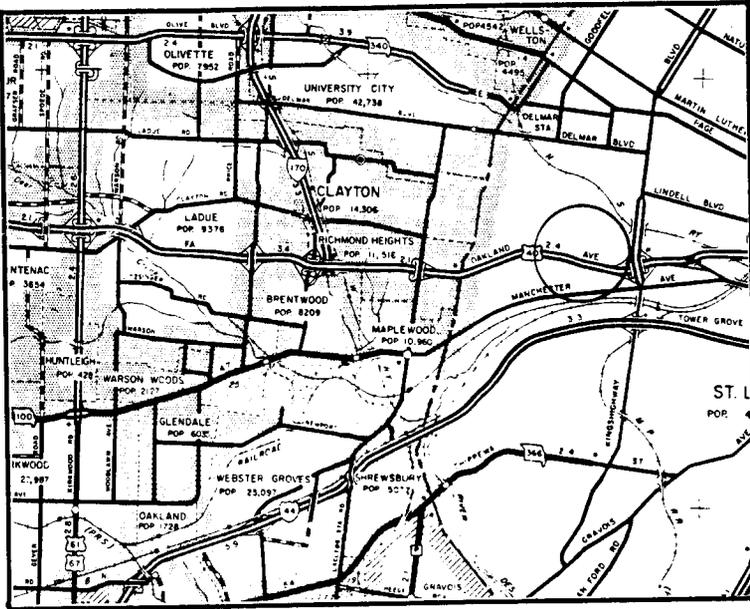
This twin-span concrete bridge carries McCutcheon Road over U.S. Highway 40 in St. Louis. The structure is a concrete rigid frame, which features four girder ribs with arched haunches, doweled rigidly to abutments and tapered concrete columns. The Highway 40 Underpass was designed by the Missouri State Highway Department as part of work on U.S. Highway 40 in St. Louis. On July 7, 1944, MSHD awarded a contract to build the bridge to the Isreal Brothers. Presumably, the contractor finished the bridge later that year. Total cost: \$74,136.00. Since its completion, the underpass has carried vehicular traffic in essentially unaltered condition.

Developed by Westchester County, New York, in the early 1920s, the concrete rigid frame bridge became especially popular for federal relief projects during the 1930s. Both picturesque and practical, the flat or elliptically arched designs appealed to proponents of urban beautification. The Missouri State Highway Department used the concrete rigid frame sparingly in urban overpass situations, never adopting this structural type as a state standard. Only seven concrete rigid frame bridges have been identified by the statewide bridge inventory, all of which are in either St. Louis or Kansas City. Although built relatively late in the milieu of rigid frame construction, the Highway 40 Underpass is distinguished by its well-preserved condition. It is technologically significant as a relatively rare example of what was essentially an experimental structural type for the state highway department.

**NAME(S) OF STRUCTURE**

U.S. Highway 40 Underpass

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number K 861; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Elmer Napier, "Rigid-Frame Bridges," Roads and Bridges, April 1940, page 13.

**INVENTORIED BY**

Clayton B. Fraser

**AFFILIATION**

Fraserdesign, Loveland CO

**DATE**

4 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Highway 231 Overpass  
MHTD: L 53R1

STLO13

**DATE(S) OF CONSTRUCTION**

1947

**LOCATION**

State Highway 231 over Interstate Highway 255;  
1.0 mile east of Mehlville; St. Louis County, Missouri

**USE (ORIGINAL / CURRENT)**

highway overpass / highway overpass

**RATING** NRHP possibly eligible (score: 55)

**CONDITION**

good

**OWNER**

Missouri Highway and Transportation Department

span number: 2  
span length: 66.0'  
total length: 220.0'  
roadway wdt.: 52.0'

superstructure: concrete rigid frame  
substructure: concrete abutments, wingwalls and pier  
floor/decking: concrete deck  
other features: arched girders; solid concrete guardrails; abstract emblem on spandrel

This twin-span concrete bridge carries State Highway 231 over Interstate 255 in south St. Louis County, near the small town of Mehlville. The structure is a concrete rigid frame, which features four girder ribs with arched haunches, doweled rigidly to abutments and tapered concrete columns. The Highway 231 Overpass was designed early in 1947 by the Missouri State Highway Department. On February 28, 1947, MSHD awarded contracts to build and pave the bridge to Henry L. Perkinson, the J.E. Latta Construction Company, and the Grantwood Contracting Company. Presumably, the contractor finished the bridge later that year. Total cost: \$158,980.13. Since its completion, the overpass has carried vehicular traffic in essentially unaltered condition.

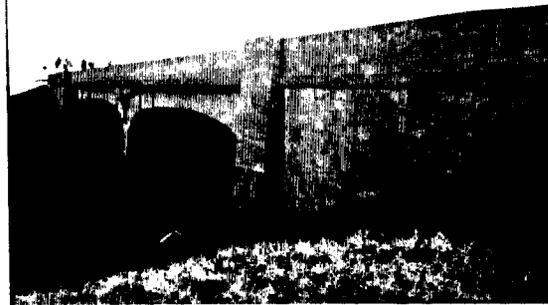
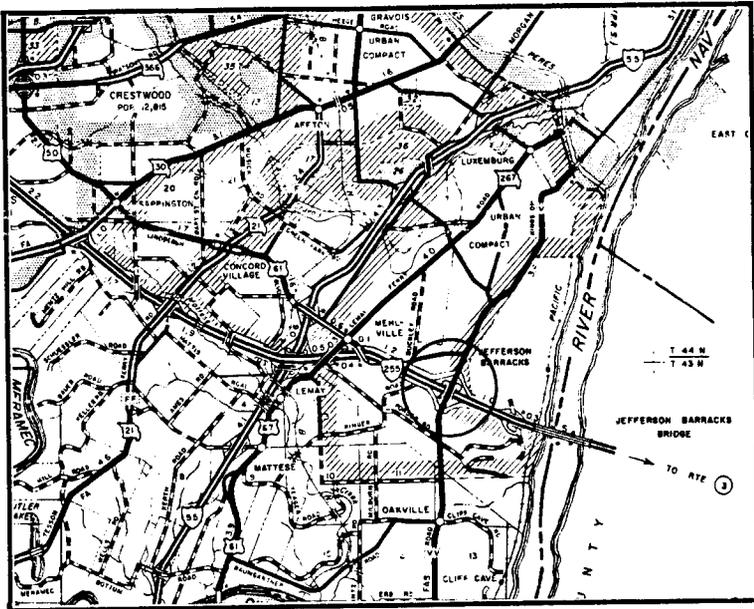
Developed by Westchester County, New York, in the early 1920s, the concrete rigid frame bridge became especially popular for federal relief projects during the 1930s. Both picturesque and practical, the flat or elliptically arched designs appealed to proponents of urban beautification. The Missouri State Highway Department used the concrete rigid frame sparingly in urban overpass situations, never adopting this structural type as a state standard. Only seven concrete rigid frame bridges have been identified by the statewide bridge inventory, all of which are in either St. Louis or Kansas City. Although built relatively late in the milieu of rigid frame construction, the Highway 231 Overpass is distinguished as the longest of the remaining rigid frame structures in the inventory. It is technologically significant as a relatively rare example of what was essentially an experimental structural type for the state highway department.

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**NAME(S) OF STRUCTURE**

Highway 231 Overpass

**PHOTOS AND SKETCH MAP OF LOCATION**



**LOCATION MAP**

TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

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**SOURCES**

Missouri Highway and Transportation Department, Structure Inventory and Appraisal: Structure Number L53R1; Primary System Bridge Record, located at the Missouri Highway and Transportation Department, Jefferson City MO; Elmer Napier, "Rigid-Frame Bridges," Roads and Bridges, April 1940, page 13.

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**INVENTORIED BY**

Clayton B. Fraser

**AFFILIATION**

Fraserdesign, Loveland CO

**DATE**

4 August 1994

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# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Chain of Rocks Bridge  
MHTD: none

STLO18

**DATE(S) OF CONSTRUCTION**

1927-29

**LOCATION**

abandoned U.S. Highway 66 over Mississippi River;  
St. Louis; St. Louis MO / Madison IL County, Missouri

**USE (ORIGINAL / CURRENT)**

highway bridge / abandoned

**RATING** NRHP eligible (score: 77)

**CONDITION**

fair

**OWNER**

City of Madison, Illinois

span number: 2; 8  
span length: 700.0'; 350.0'  
total length: 5350.0'  
roadway wdt.: 40.0'

superstructure: steel, 20- and 12-panel, rigid-connected cantilevered through truss, with rigid-connected Warren through truss approach spans  
substructure: concrete abutments, wingwalls and piers  
floor/decking: concrete deck over steel stringers  
other features: upper chord and inclined end post: 2 built-up channels with cover plate and double lacing; lower chord: 2 built-up channels with lacing; vertical: 2 channels with lacing, built-up I-beam; diagonal: 2 channels with lacing; lateral bracing: 4 angles with lacing; strut: 4 angles with bracing; floor beam: I-beam; guardrail: steel angles

Route 66 between Chicago and Los Angeles was formally designated a United States Highway in November 1926 by the Secretary of Agriculture, as part of the country's newly designated interstate highway system. The largest city between the highway's two termini, St. Louis also presented the widest river crossing along its length—over the Mississippi River. As originally routed, the highway crossed into St. Louis over the McKinley Bridge [STLC16]; around 1934 it was later switched over the MacArthur Bridge [STLC15]. Both of these spans funneled traffic into St. Louis's warehouse district, however, further congesting the already-congested city streets downtown. In the late 1930s the route was again shifted, this time over the Chain of Rocks Bridge, which, at 40 feet, had a deck ten feet wider than MacArthur. Chain of Rocks brought travelers into the city from the north, past the popular Chain of Rocks amusement park, called "one of the prettiest places in the city." This latter span carried Route 66 traffic until its closure in 1970.

The Chain of Rocks Bridge had been built in the late 1920s to provide highway access between Madison, Illinois, and north St. Louis. Reportedly the sixth vehicular bridge over the Mississippi River in the area, it was sponsored by private money and paid for by tolls. In 1927 the Chain-of-Rocks and Kingshighway Bridge Company, a consortium of local capitalists led by Tom and John Scott, received a Congressional charter to build a highway bridge over the Mississippi River near the city's Chain of Rocks water pumping station. Designed by St. Louis consulting engineer Baxter L. Brown, the structure would cost \$1.25 million. As delineated by Brown, the Chain of Rocks Bridge consisted of five continuous, rigid-connected trusses that formed ten spans, the longest of which extended 700 feet. These were supported on massive concrete piers some 55 feet above the high water mark and were approached on both sides by a series of simply supported trusses and, on the north side, a four-mile-long fill. The bridge was to be located immediately upstream from the intake tower for the water works. Originally planned with a straight roadway over its one-mile length, its configuration was changed under orders of the War Department after riverboatmen complained of the difficulty in steering around both the bridge and the tower. The

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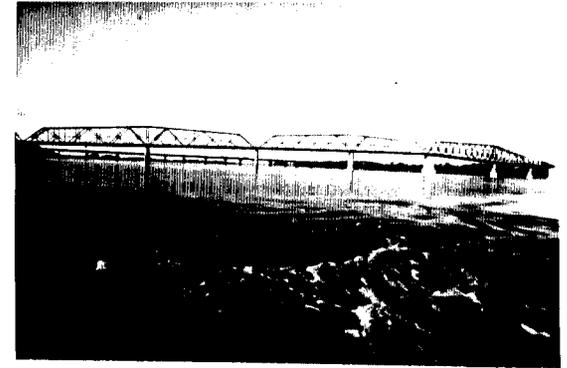
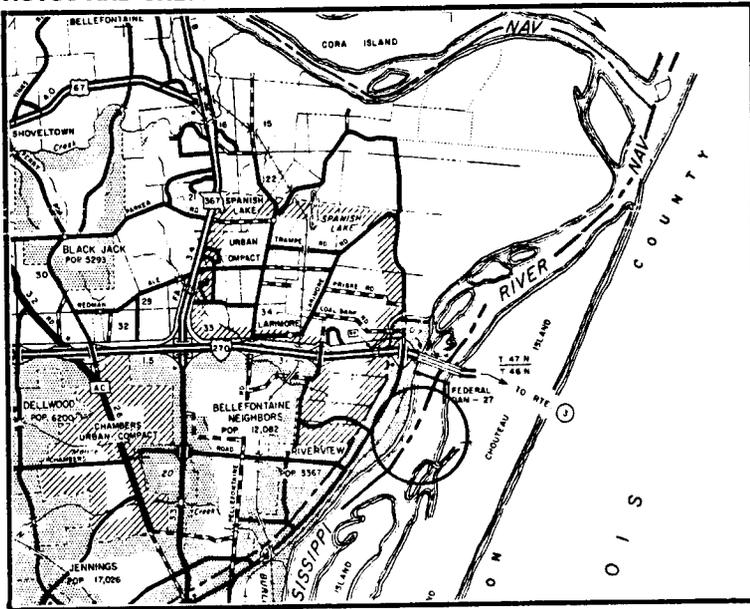
re-designed bridge incorporated a 30° bend in its roadway near mid-span. Despite the assurance that the turn would be "protected by special signs and signals, so that traffic will not be appreciably slowed down," the bent bridge formed a bottleneck that became legendary. The contract to build the concrete substructure and erect the steel superstructure was awarded to the Union Bridge and Construction Company of New York; the American Bridge Company was hired to fabricate the trusses. Actual construction began in 1927; by March 1928 the steelworkers were ready to begin erection of the superstructure on the partially complete substructure. When the piers were completed in August 1928, the engineers predicted a January 1st opening. Subsequent high waters on the Mississippi delayed this for another half-year, however. Eventually costing about \$2.5 million to construct, the Chain of Rocks Bridge was opened ceremoniously to traffic on July 20, 1929. Three years later the City of Madison issued \$2.3 million in bonds and purchased the structure from the bridge company. The city continued collecting tolls until August 1957, at which time the bridge was opened for free passage. In 1970 it was closed to traffic altogether. Since that time, the bridge has been a target of graffiti by gangs, the prop for the movie "Escape from New York," and in 1991 the scene of a grisly double murder. Its future is presently clouded.

As the "Main Street of America" that extended from Chicago to Los Angeles, Route 66 has proved vital in the development of American commerce and culture. "For forty-nine years that highway was a factor in millions of trips, vacations, and relocations," wrote historian Susan Croce. "It provided a living to countless men and women, ran down main streets of the hometowns of millions more, and figured in a billion personal experiences. It brought wealth and recognition to people like Bobby Troup and John Steinbeck. It brought destruction and death to others who did not respect its twists and turns and peculiarities." Forming the highway's crossing over America's largest river, the Mississippi, the Chain of Rocks Bridge has played a pivotal role in the highway's history. The bridge is technologically important as an outstanding example of large-scale highway bridge construction in the 1920s. With its graceful, long-span trusses cantilevered over tapered concrete piers and the awkward bend in the roadway, the structure is both noteworthy and distinctive. It is today a well-preserved, nationally important remnant of early highway design and construction—one of Missouri's most important bridges.

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**NAME(S) OF STRUCTURE**

Chain of Rocks Bridge

**PHOTOS AND SKETCH MAP OF LOCATION****LOCATION MAP**TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

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**SOURCES**

"Seven New Mississippi River Highway Bridges," *Engineering News-Record*, 31 July 1930, pages 181-84; Susan Croce Kelly and Quinta Scott, *Route 66* (Norman, Oklahoma: University of Oklahoma Press, 1988), page 76; Mary Charlotte Aubry Costello, *Mississippi River Bridge by Bridge* (By the Author, 1995), pages 66-67; Michael Wallis, *Route 66: The Mother Road* (New York: St. Martins Press, 1990), page 53; *St. Louis Globe-Democrat*, 5 November 1927, 2 December 1927, 2 March 1928, 17 August 1928, 25 June 1929, 21 July 1929, 18 March 1932, 17 May 1941, 25 August 1957; Peter Hernon, "Bridge's History a Troubled One," *St. Louis Post-Dispatch*, 15 April 1991; David G. Wrone, "Old Bridge a Secluded Teenage Hangout," *Bellefontaine-Jennings Journal*, 14 April 1991; field inspection by Clayton Fraser, 10 June 1994.

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